

PATENT CLAIMS

- 5 1. A screwed connection, particularly designed to screw housing parts with a series of fixing screws, each screw comprising a respective bolt head, screw shank and screw thread, wherein the fixing screws project with their screw shank through a screw bore of a housing top and are screwed with their thread and a matching female thread of a bottom part of an housing, so that the fixing screws shore up at the housing top and connect the top with the bottom part of the
- 10 housing in a releasable manner, **characterised in that the screwed connection comprises a tight-fitting neck (2) in a transition area between the screw shank (4) and the bolt head (3), by which, when the fixing screw is screwed in, an external area of the screw bore (8) next to the tight-fitting neck (2) is deformed, so that a counter sealing surface (11) is created in this area, which in combination with the tight-fitting neck (2) produces a sealing connection.**
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2. A screwed connection according to claim no. 1, **characterized by the fixing screw (1) comprising a tight-fitting neck (2) as integral component.**
3. A screwed connection according to claims nos. 1 and 2, **characterized by a circumferential**
- 20 **clearance in an area of the respective screw bore (8) facing the tight-fitting neck (2) of the respective fixing screw being designed as cavity so as to accept material build-ups from the area of the counter sealing surface (11).**
4. A screwed connection as per claim no. 3, **characterized in that the clearance is formed as**
- 25 **a trimming (25) or as a skimming (26).**
5. A screwed connection according to one of claims nos. 1 to 4, **characterized by the bolt head (3) of the respective fixing screw (1) comprising a bolt head connecting surface (9) on the side facing the tight-fitting neck (2), which, when the respective fixing screw is screwed**
- 30 **in, tightly fits with the connecting surface of the housing top surrounding the respective matching screw bore in an area next to the bolt head connecting surface.**

6. A screwed connection according to claim no. 5, **characterized by** a circumferential tangent continuous transition (37) designed between the tight-fitting neck (2) and the bolt head connecting surface (9) of the respective fixing screw (1).

5 7. A screwed connection according to one of claims nos. 1 to 5, **characterized by** the height (13) and / or the incline (14) of the tight-fitting neck (2) being adjustable to the dimensions of the screw bore (8) in relation to the screw shank (4).

10 8. A screwed connection according to one of claims nos. 1 to 5, **characterized by** the height (13) and / or the incline (14) of the tight-fitting neck (2) being adjustable to the material characteristics of the screw bore (8) in relation to the screw shank (4).

15 9. A screwed connection according to one of claims nos. 1 to 8, **characterized by** the tight-fitting neck (2) being shaped as a cone frustum forming a sealing cone, the base of which faces the bolt head (3).

20 10. A screwed connection according to one of claims nos. 1 to 9, characterized by the tight-fitting neck (2) being shaped as a spherical sector or as a hyperboloid section the base of which faces the bolt head (3).

11. A screwed connection according to one of claims nos. 1 to 10, characterized by the tight-fitting neck (2) being made of hardened steel at least at its surface.

25 12. A screw (1) with a cone-shape designed tight-fitting neck (2).

13. A screw according to the aforementioned claim, the tight-fitting neck (2) of which comprises a tangent continuous transition (37) between the cone (2) and the bolt head (3).

30 14. A sealing cone component (40) to produce a sealing connection in combination with a screw (1) projecting through the sealing cone and comprising an internal hole to pass the screw shank – of round or non-round cross-section – an external tight-fitting neck (2) as well as a sealing surface (42) for a tight fitting of the bolt head, normal to the axis of the internal hole.

15. A sealing cone component (40) according to the aforementioned claim, the external tight-fitting neck (2) of which is designed in cone-shape.

5 16. A sealing cone component (40) according to claims 14 or 15, the external tight-fitting neck (2) of which is designed with a tangent continuous transition (37) towards the cone.

10 17. A sealing cone component (40) according to the aforementioned claim, the sealing contour of which in combination with the cavities of a housing part is designed in a way that with temperature fluctuations and different materials with different temperature expansion coefficients the housing expands or shrinks into and out of the cavities 60 and the cone surface 64 of the screw and the housing remains basically unchanged, which guarantees a continuous tightening torque and tightness.